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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/742,415	12/22/2000	Michio Yanagi	35.C14997	8025
5514	7590	11/19/2003	EXAMINER	
FITZPATRICK CELLA HARPER & SCINTO			SHAFFER, RICKY D	
30 ROCKEFELLER PLAZA			ART UNIT	
NEW YORK, NY 10112			PAPER NUMBER	

2872

DATE MAILED: 11/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/742,415

Applicant(s)

YANAGI ET AL.

Examiner

Ricky D. Shafer

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 August 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) 3,4,11-13 and 15-26 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,5-8 and 14 is/are rejected.
- 7) ☒ Claim(s) 9 and 10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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1. The substitute specification filed on 28 August 2003 has been entered
2. Applicant's arguments filed 28 August 2003 have been fully considered but they are not persuasive.

Applicant argues that by using an intermediate layer of TiO₂ instead of an intermediate layer of Cr, as taught by the prior art to Sakamoto ('076), results in unexpected and superior results and refers to the examiner to various pages of the specification.

However, the exemplary references to Grewal et al ('209) and Tatsuo et al ('003) each teach it is well known to employ an intermediate layer consisting of a chromium or titanium type material between a substrate or base body and a light reflective layer in order to obtain a mirror structure with increase durability (i.e. adhesion and corrosion resistance) and longevity in the reflection properties which would obviously convey to one of ordinary skill in the mirror art the general knowledge of selectability or equivalency of one corrosion resistance material with high adhesion for another corrosion resistance material with high adhesion.

Therefore, the mere fact that applicant has recognized other latent properties or advantages in the prior art or within the knowledge generally available to one of ordinary skill in the art cannot be the basis for patentability when the differences would otherwise be obvious.

Note: In re Wiseman, 596 F.2d 1019, 201 USPQ 658 (CCPA 1979) and *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

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3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 2, 5-8 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakamoto ('076).

Sakamoto discloses a metallic rotary polygonal mirror comprising a substrate (1) made of aluminum or aluminum alloy, an intermediate layer (2) of Cr having thickness within the range recited by applicant, a metallic reflective layer (3) of Cu having a thickness within the range recited by applicant and at least two protective layers (4, 5), wherein the first protective layer (4) is of Al₂O₃, and the mirror has a surface reflectance of at least 95 percent at a selected wavelength (see Table 4), note figures 1, 2, 4 and 5 along with the associated description thereof, except for explicitly stating that the intermediate layer comprises TiO₂.

It is well known to use an intermediate layer of TiO₂ as a high index material in the same field of endeavor for the purpose of increasing the optical reflectance (i.e. longevity) and durability (i.e. adhesion and corrosion resistance) of a metallic reflecting mirror.

Therefore, it would have been obvious and/or within the level of one of ordinary skill in the art at the time the invention was made to substitute the high index material of chromium employed by Sakamoto with a similar high index material of TiO₂, as is commonly used and

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employed in the mirror art, in order to increase the reflectance (i.e. longevity) and durability (i.e. adhesion and corrosion resistance) of the metallic reflecting mirror.

5. Claims 9 and 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

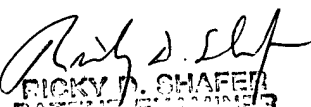
6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication should be directed to R.D. Shafer at telephone number (703) 308-4813.

RDS

November 13, 2003


RICKY D. SHAFER
PATENT EXAMINER
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